

REMARKS/ARGUMENTS

The present Amendment is responsive to the final Office Action mailed April 28, 2009 in the above-identified application.

Claims 20-24 are canceled without prejudice or disclaimer. Therefore, claims 1-6 and 9-13 are the claims currently pending in the present application.

Claim 1 is amended to clarify features recited thereby. These amendments are fully supported by Applicant's disclosure, see, for example, Specification, page 15, lines 1-2, which states that the blades penetrate into the strip 157, which is formed, for example, of polyurethane.

Rejection of Claims 1-4 and 6 under 35 U.S.C. § 103

Claims 1-4 and 6 are rejected under 35 U.S.C. § 103 as being obvious over Garrett et al., U.S. Patent No. 3,899,945 in view of Hirakawa et al., U.S. Patent No. 5,297,461 and Scheffer et al., U.S. Patent No. 4,962,683. Reconsideration of this rejection is respectfully requested.

Without intending to limit the scope of the claims, according to an aspect of Applicant's invention as claimed in claim 1, a working strip comprising a flexible material is provided on a counter-tooling having a substantially cylindrical surface, and blades of the first tooling penetrate into the flexible material of the working strip as discussed, for example, at Specification, page 3, lines 12-22.

Claim 1 requires a machine for processing a sheet for production of packagings, the machine comprising a processing apparatus comprising a first tooling supported by a first rotary support shaft and a counter-tooling supported by a second rotary support shaft, the counter tooling comprising at least one working strip positioned thereon, the at least one working strip comprising a flexible material to allow the blades of the first tooling to penetrate into the at least one working strip.

Garrett discloses an apparatus for die cutting of paperboard blanks passing between a pair of cooperating die and anvil cylinders (Garrett, Abstract). Garrett discloses that the die cylinder 16 is constructed to carry conventional cutting and scoring rules 34 mounted on the arcuate plywood backing or die blanket 35 secured to the cylinder; and that the anvil cylinder is completely covered by a relatively thin resilient cover 36 such as polyurethane plastic (Garrett, column 7, lines 11-16 and Fig. 5).

Hirakawa discloses an anvil cylinder including a plurality of ring-shaped sections along an axial direction of the shaft, and elastic bodies fixedly secured to parts of the outer circumferential surfaces of the anvil cylinder sections over the entire length of the cylinder (Hirakawa, Abstract). Hirakawa describes that a rotary shear disposed in a traveling passage of a corrugated cardboard web cuts and slits in the widthwise direction of the corrugated cardboard web and that a knife 1 is secured on a knife cylinder 2. Hirakawa discloses that the function of a rotary shear of cutting a corrugated cardboard web 6 traveling between a knife cylinder 2 having the knife 1 fixed secure thereto and an anvil cylinder 4 having an anvil (elastic body) 3 fixedly secured to its outer circumferential surface in its widthwise direction or machining slitting slots having a predetermined length by synchronously rotating the knife cylinder 2 and the anvil cylinder 4 opposed to each other, is similar to that of the rotary shear in the prior art (Hirakawa, column 6, lines 59-68 and Fig. 4).

Scheffer discloses that the anvil cylinder 144 carries a plurality of longitudinally extending arcuate anvil bars 214 which are circumferentially spaced about the anvil cylinder such that each anvil bar cooperates with a pair of a knife blade 164 during synchronized rotation of the knife and anvil cylinders (Scheffer, column 12, lines 36-41). Further, Scheffer discloses that by supporting the knife blades 164 for pivotal movement about their corresponding pivot axis 166 against the force of the biasing springs 180 and 192, interference between the knife blades and the associated anvil bars is accommodated by pivotal movement of the knife blades with the result that damage to the knife blades upon impacting the anvil bar is substantially eliminated, and significantly longer knife blade life is thus achieved (Scheffer, column 13, lines 6-14 and Fig. 9). Also, Scheffer discloses that by predetermined selection of the springs 60, 72, 180 and 192, a very precise cutting force may be applied between the knife blades and the anvil cylinder, and thus selecting the springs to effect a cutting force between the knife blades and associated anvil cylinder or anvil bar of approximately 600 pounds per linear inch along the knife blades will generally result in a desired cut through the web 16 (Scheffer, column 13, lines 20-27, and Fig. 9).

Even taken together in combination, Garrett, Hirakawa and Scheffer do not disclose or suggest at least one working strip including a flexible material to allow the blades of the first tooling to penetrate into the at least one working strip, as required by claim 1. Accordingly, even

taken together in combination, Garrett, Hirakawa and Scheffer do not disclose or suggest the recitations of claim 1.

Further, a hypothetical modified device based on Garrett, Hirakawa and Scheffer would not address the problems recognized and solved according to an aspect of Applicant's invention as claimed in claim 1 because such a hypothetical device would include an anvil cylinder with working strips with flexible material and cutting blades mounted on springs. Thus, the working strips would have different shapes which implies different thicknesses, during the passage of the sheet or blank to be cut. This also would result in a situation in which the position of each of the edges of the cutting blades would vary with respect to the working strips of the anvil cylinder during the passage of the sheet to be cut. Such a hypothetical device, even if the cited references could be combined as proposed, would not work for the cutout and fold since the blades could be spring biased in an advantageous manner only if the working strips are made of hard material. Thus, a hypothetical modified device with cutting blades mounted on springs and an anvil cylinder including working strips with flexible material would cause cutout and fold of a poor quality because the cutting forces would not be set due to the presence of the working strips with flexible material on the surface of the anvil cylinder. Accordingly, the movable cutting blades could not penetrate into the working strip material in such hypothetical device based on the cited art.

Claims 2-4 and 6 depend from claim 1, and therefore are patentably distinguishable over the cited art for at least the same reasons.

Rejection of Claims 5 and 9-13 under 35 U.S.C. § 103

Claim 5 is rejected under 35 U.S.C. § 103 as being obvious from Garrett et al., Hirakawa and Scheffer in view of Kishine et al., U.S. Patent No. 6,401,583.

Claims 9-13 are rejected under 35 U.S.C. § 103 as being obvious from Garrett et al., Hirakawa and Scheffer in view of Thiel et al., U.S. Patent No. 6,220,134. Reconsideration of these rejections is respectfully requested.

Kishine and Thiel do not cure the above-discussed deficiencies of Garrett, Hirakawa and Scheffer as they relate to the above-noted features of claim 1. Further, the Office Action does not allege that Thiel discloses or suggests such features.

Therefore, since claims 5 and 9-13 depend claim 1, they are patentably distinguishable over the cited art for at least the same reasons.

Rejection of Claims 20-24 under 35 U.S.C. § 103

Claims 20-24 are rejected under 35 U.S.C. § 103 as being obvious from Garrett in view of Hirakawa. Further, claim 22 is rejected under 35 U.S.C. § 103 as being obvious from Garrett and Hirakawa in view of Kishine et al., U.S. Patent No. 6,401,583. Reconsideration of these rejections is respectfully requested.

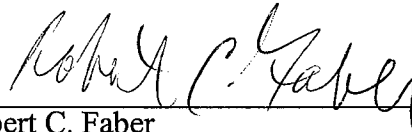
Claims 20-24 are canceled without prejudice or disclaimer and therefore the rejection is moot.

In view of the foregoing discussion, withdrawal of the rejections and allowance of the claims of the application are respectfully requested.

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